

Appl. No. 09/654,293
Reply to Office action of May 3, 2005

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

- 1-73 (canceled)
74. (new) A method of enucleating an avian oocyte comprising:
visualizing internal structure of an avian oocyte utilizing TPLSM and ablating
a nucleus of the oocyte by near-infrared light, thereby enucleating an avian oocyte.
75. (new) The method of claim 74 wherein the oocyte is injected or incubated
with a DNA specific dye.
76. (new) The method of claim 75 wherein the dye is DAPI or Hoescht 33342.
77. (new) The method of claim 74 wherein the oocyte is a chicken oocyte.
78. (new) The method of claim 74 wherein the oocyte is at metaphase I.
79. (new) The method of claim 74 wherein the oocyte is at metaphase II.
80. (new) The method of claim 74 wherein the oocyte is a germinal disc.
81. (new) The method of claim 74 wherein the TPLSM employs a femtosecond
laser.
82. (new) The method of claim 74 wherein the near-infrared light has a
wavelength in a range of about 700nm to about 1000nm.
83. (new) The method of claim 74 wherein the near-infrared light has a
wavelength of 750 nm.

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84. (new) The method of claim 74 wherein the visualizing is done using a laser power of about 3 to about 6 milliwatts.

85. (new) The method of claim 74 wherein the nucleus is ablated using laser power of about 30 milliwatts to about 70 milliwatts.

86. (new) A method of enucleating an avian zygote comprising:
visualizing internal structure of an avian zygote utilizing TPLSM and ablating a nucleus of the zygote by near-infrared light, thereby enucleating an avian zygote.

87. (new) The method of claim 86 wherein the zygote is injected or incubated with a DNA specific dye.

88. (new) The method of claim 87 wherein the dye is DAPI or Hoescht 33342.

89. (new) The method of claim 86 wherein the zygote is a chicken zygote.

90. (new) The method of claim 86 wherein the zygote is a pronuclear zygote.

91. (new) The method of claim 86 wherein the TPLSM employs a femtosecond laser.

92. (new) The method of claim 86 wherein the near-infrared light has a wavelength in a range of about 700nm to about 1000nm.

93. (new) The method of claim 86 wherein the near-infrared light has a wavelength of 750 nm.

94. (new) The method of claim 86 wherein the visualizing is done using a laser power of about 3 to about 6 milliwatts.

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95. (new) The method of claim 86 wherein the nucleus is ablated using laser power of about 30 milliwatts to about 70 milliwatts.

96. (new) A method of enucleating an avian oocyte or zygote comprising:
visualizing internal structure of an avian oocyte or zygote utilizing TPLSM at a laser power of about 3 milliwatts to about 6 milliwatts and ablating a nucleus of the oocyte or zygote by near-infrared light, thereby enucleating an avian oocyte or zygote.

97. (new) The method of claim 96 wherein the oocyte or zygote is a chicken oocyte or zygote.

98. (new) The method of claim 96 wherein the near-infrared light has a wavelength in a range of about 700nm to about 1000nm.

99. (new) The method of claim 96 wherein the nucleus is ablated using laser power of about 30 milliwatts to about 70 milliwatts.

100. (new) A method of enucleating an avian oocyte or zygote comprising:
visualizing internal structure of an avian oocyte or zygote utilizing TPLSM and ablating a nucleus of the oocyte or zygote by near-infrared light having a wavelength of about 700 nm to about 1000 nm, thereby enucleating an avian oocyte or zygote.

101. (new) The method of claim 100 wherein the oocyte or zygote is a chicken oocyte or zygote.

102. (new) The method of claim 100 wherein the near-infrared light has a wavelength of 750 nm.

103. (new) The method of claim 100 wherein the nucleus is ablated using laser power of about 30 milliwatts to about 70 milliwatts.

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104. (new) A method of enucleating an avian oocyte or zygote comprising:
visualizing internal structure of an avian oocyte or zygote utilizing TPLSM
and ablating a nucleus of the oocyte or zygote by near-infrared light using a laser power of
about 30 milliwatts to about 70 milliwatts, thereby enucleating an avian oocyte or zygote.

105. (new) The method of claim 104 wherein the oocyte or zygote is a chicken
oocyte or zygote.

106. (new) The method of claim 104 wherein the near-infrared light has a
wavelength in a range of about 700nm to about 1000nm.